

Sweep and Marker Generators • Audio Spectrum Analyzers • Noise Generators • Attenuators

SHORT
FORM
CATALOG

KAY

Sweep and Marker Generators



121C



154C

121C: This solid-state instrument is an electronically swept VHF-UHF wide-sweep and marker generator which accepts a variety of UHF plug-ins to provide extended frequency ranges and sweep widths. With its plug-ins, the 121C covers a range of 500 KHz to 1700 MHz, offers octave-wide sweeps at low UHF frequencies where most generators in this range are limited to narrow widths. Narrow and wide-sweep plug-ins cover special applications such as UHF-TV—full 440 to 920 MHz—in a single wide sweep. A digital frequency dial provides smooth center frequency control and remarkable vernier adjustment for narrow sweep operation.

Performance characteristics include line lock, CW, manual and variable sweep rates and external modulation input.

A built-in detector and switched attenuator are standard features.

154C-159C: These up-to-the-minute versions of Kay's 154 and 159 are completely solid-state, electronically swept, wide-sweep and marker generators which cover their ranges in a single wide sweep. The additional features of continuously variable sweep width and multiturn digital frequency dial provide exceptional fine touch settings over the video, IF and VHF range. The use of a broad output amplifier in these beat frequency units permits light coupling of the mixed oscillators, thus providing high RF levels with superior waveshape; dis-

tortion and spurious are minimal.

Performance characteristics include line lock, CW, manual, wide variable sweep rates, and external modulation input. Frequency range may be swept from HI to LO or from LO to HI as required. Automatic leveling may be controlled either externally or internally.

PM7650B and PM7660B marker plug-ins offer up to eight, optional, pulse or birdie markers at customer specified frequencies. Provision for a variable birdie marker derived from an external oscillator is included on these instruments. A built-in detector and precision step attenuator are standard features.

1500: The model 1500 is a high performance electronic sweep and marker generator which accepts a variety of sweep and marker plug-ins to cover the frequency spectrum from 20 Hz to 1 GHz. The basic rack unit contains a variable sawtooth sweep generator, a fast acting AGC, frequency marker control, RF output circuits with precision attenuators and built-in RF detector. The 1500 functions as a voltage-tuned oscillator over its entire range.

Performance characteristics include line lock, variable sweep rates, manual sweep, and external modulation.

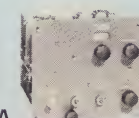
860G: The model 860G includes all of the features of the 1500 less the marking system. It is intended for use where the frequency marking is obtained from an external system or frequency counter.



1500A1



P-860E



P-141A



P-855B

Frequency Range	Model No.	Sweep Width	RF Output	Flatness	Markers	Features
20 Hz - 200 KHz	141D	20 Hz - 200 KHz	5 V., 600Ω	±.5 db overall	9 pulse-type at customer specified frequencies.	Ultra stable narrow sweeps, log or lin; manual, external modulation; synchronous detector; built-in attenuator, pulse markers.
50 Hz - 220 MHz	935C	50 Hz - 30 MHz	1 V., 70Ω		7 pulse-type at customer specified frequencies.	Single sweep from 10 MHz down to 1 KHz. 9 fundamental bands 10 to 220 MHz. Audio sweep. 7 narrow, fixed bands.
50 KHz - 110 MHz	154C	5 KHz - 110 MHz	1.0 V., 50Ω metered	±0.25 db	PM7650 up to 8 pulse markers to order.	Solid-state, wide sweep: plug-in marker system. Sweeps full 110 MHz to low end 50 KHz. Pulse and harmonic markers. Sweep rates .01-1000 Hz.
1 MHz - 300 MHz	159C	20 KHz - 300 MHz	0.5 V., 50Ω metered		PM7660 up to 8 single birdie or 7 harmonic birdie markers to order.	Similar to 154C solid-state sweep and marker system. Very flat, very low harmonics and spurious.
20 Hz - 1 GHz	1500A1	0* - 500 MHz	0.5 or 1.0 V., 50Ω metered	±0.5 db	PM7631, PM7632 up to 6 pulse markers to order; PM932 up to 30 pulse markers to order; PM861 up to 6 birdie markers to order.	Sweep and marker plug-ins. Stable, narrow 20 Hz sweep widths flat, 500 MHz wide sweeps. Pulse and single frequency or harmonic birdie markers.
20 Hz - 1 GHz	860G	0* - 500 MHz	0.5 or 1.0 V., 50Ω metered	±0.5 db	PM861ASC	Sweep generator plug-ins as in 1500A1. Slow sweeps, manual, ext. modulation.
500 KHz - 1.7 GHz	121C	5 KHz - 500 MHz	0.5 V., 50 metered	±.25 db to 800 MHz ±.5 db to 1.7 GHz	Birdie harmonic at 1, 10, 100 MHz or customer specified frequency.	Solid-state, electronic wide sweep and marker generator. Narrow sweep operation over 1700 MHz range.

*Residual

Sweep and Marker Plug-ins



Harmonic Birdie Markers



PM-861



PM-7660



Single Birdie Markers

P-130E, P141A, and P142A: These sweep plug-ins have been designed for either model 1500 or 860 basic rack units as ultra-stable narrow band units capable of sweeping steep-skirted filters and, in another mode as wide-sweeping oscillators. These units utilize crystal-controlled beat frequency oscillators to provide a full 1 volt rms into load with excellent waveshape. With a choice of either log or lin sweep, amplifier responses can be displayed with meaningful low end expansion.

P152: This model is a solid-state beat-frequency plug-in which provides 20 MHz down to less than 10 KHz in a single linear or logarithmic sweep. Continuously variable sweep width and a fine touch digital frequency control provide excellent operation as a stable, narrow band sweep covering AM, IF, and video frequencies in two switched bands.

P154A: The all-new P154A is a solid-state sweep plug-in which covers its wide 50 KHz to 115 MHz range in a single frequency sweep. The additional features of continuously variable sweep width and center frequency adapt this wide sweep to excellent, stable, narrow sweeps over the video, FM, IF range. The output voltage is a high 1 volt rms into load, held extremely flat to within ± 0.25 db. Utilizing proven circuit techniques, harmonic and spurious distortion has been minimized. Log or lin sweep display provides meaningful low end expansion.

P855 and P856: Recently designed sweep plug-ins meet the rigorous requirements of narrow-band, steep-skirt filter applications. These versatile and flexible electronically swept plug-ins operate to the highest signal generator standards of long and short term frequency stability. Both are fundamental frequency, low distortion units that hold firm on the sharpest slope, are easy to set and easy to count.

P860: This model is a twelve band, general purpose sweep plug-in providing high-level fundamental frequency output from 2 to 220 MHz. Compatible with Kay model 1500 or 860G, it provides frequency sweeps which are flat and linear and generates enough output voltage to permit testing of lossy networks. This output is held constant by a fast-acting AGC and is fundamental frequency assuring excellent waveshape and the complete absence of spurious products.

PI 123A: This is a solid-state, octave-sweeping VHF-UHF sweep generator plug-in providing stable fundamental frequency output. It provides customer selected frequency sweeps from 100-200 MHz, 200-400 MHz, 500-1000 MHz, etc., which are frequency linear to better than 1.1 to 1. The RF output is held constant over the entire range by a fast-acting AGC circuit, provides excellent waveshape, and is completely free of spurious products.



Pulse-Type Markers



PM-7650



PM-7631



Internal Markers

Frequency Range	Model No.	Sweep Width	RF Output	Flatness	Features
20 Hz - 200 KHz	P-141A	0* - 20 KHz	1.0 V. rms	±0.5 db	Narrow sweeps; drift 3 Hz in one minute. Residual FM 0.2 Hz.
35 Hz - 600 KHz	P-142A	0* - 20 KHz			Narrow sweeps; wide sweeps to 2 MHz. Low drift and residual. Wide video sweeps to below 10 KHz. Lin or log. High output.
0* - 2 MHz	P-130F	0* - 2 MHz			
10 KHz - 20 MHz	P-152B	10 KHz - 20 MHz			
50 KHz - 115 MHz	P-154A	0* - 100 MC		±0.25 db	Solid-state plug-in covers FM band in extremely flat, wide sweep; very good narrow sweeps; harmonic and spurious >30 db down.
2 - 32 MHz	P-855B	0* - 800 KHz			±0.5 db
10 - 120 MHz	P-856B	0* - 1 MHz		General purpose sweep. High level fundamental frequency output with excellent waveshape.	
2 MHz - 220 MHz	P-860E	10 KHz - 30 MHz	0.5 V. rms	±0.5 db	VHF-UHF sweep; fundamental frequency.
220 - 470 MHz	P-867B	20 KHz - 70 MHz			Solid-state octave sweep with excellent full-width frequency linearity.
100 MHz - 1 GHz (Any Octave)	PI-123A	0.2% - Octave			
500 KHz - 1050 MHz	P-121A	35 KHz - 350 MHz		±0.25 db ±0.5 db	Electronic, wide-sweep, stable narrow sweeps.
900 - 1300 MHz	P-122B	200 KHz - 400 MHz			±0.5 db
100 - 1000 MHz	P-123A	0.2% - Octave		Electronic, solid-state, wide-sweep.	
1.3 - 1.7 GHz	P-124A	500 KHz - 400 MHz			

Radio and TV Generators



1483

1483B: The new 1483B is a solid-state sweep and marker generator used to design, test, and align UHF-TV receivers, it develops a full 0.5 volt rms output into load over the entire channel 14 to 83 frequency range. A front panel control permits switching of the sweep width from a wide 520 MHz (entire UHF-TV band) to continuously variable widths from 60 down to 5 MHz.

Channels 14 and 83 are provided at two separate switch positions, allowing easy selection of the extreme ends of the UHF band. Single or harmonic frequency birdie marker modules are available at customer specified frequencies. A variable marker input is provided. Provisions have been made for the use of two, optional, precise rotary attenuators. The attenuation ranges available include 0-10 DB in one DB steps, 0-33 DB in 3 DB steps, and 0-60 DB in 10 DB steps.

1484A: The 1484A offers premium sweep and marker characteristics at low cost in a solid-state, limited range (e.g., 10.7 FM, 45 MC TV, 88-108 FM, 12 MC Comm., etc.) production oriented unit. Frequencies may be selected up to 1 GC and pulse markers, CW and harmonic birdie markers and RF turn-off markers can be speci-

fied. A four position band switch selects portions of the band as desired and remote control of bands and tuning can be provided.

Solid-state, durable, epoxy, printed circuit modules allow easy maintenance and inspection. The 1484A is contained in a compact cabinet for portability.

Model No.	Ranges
361	VHF Channels & IF
370	TV-IF
386AR	AM-FM
391	12-Channel Sound-Pix
392	Single Channel Sound-Pix
932	AM, FM, VHF
1483	UHF-Channels
1484	Selectable to 1 GHz



1484

Sweep-Aids



8050



997A

8040A: This is a solid-state sweep voltage generator which provides triangular wave-shapes continuously variable between .01 and 100 Hz in six overlapping ranges. It can be used with most Kay sweep generators to provide very slow sweeps and a "one-shot" start-stop single sweep for use with recorders, storage scopes, etc. Symmetrical waveshape provides equal time low-high and high-low (retrace) frequency sweeps, provides bright, coincident displays from Kay voltage-tuned capacitance sweeps. A manual sweep is provided.

8050A: The 8050A is a solid-state sweep voltage generator designed for use with most Kay sweepers in adapting the swept frequency output to the requirements of the circuit under test. Individual start-stop controls permit the use of a slow sweep in areas where ringing may occur, supplementing an easy to use fast sweep over the remainder of the frequency swing, thus providing an excellent accessory unit for sharp slope applications.

5070B: This is a fully transistorized instrument designed as a pulsed carrier generator. The pulsed output provides sharp rise and decay, and flat tops. The unit will also serve as a CW generator, as well as a video pulse generator. It provides a stable CW signal from 10

MHz to 120 MHz continuously variable in five overlapping bands. The direct reading frequency dial is calibrated to $\pm 1\%$.

997A: This RF Detector is a compact, DC to 1300 MHz unit offering flat response and low VSWR. A unique mechanical arrangement permits simple reversing of the crystal. Either positive or negative polarity outputs may be measured without being subject to the different characteristics of two separate crystals. Conversion efficiency to approximately 0.8 at 1.0 volt input.

990A: This unit is a small, compact utility CW oscillator which provides continuous coverage between 4.5 and 220 MHz in six switched ranges. The direct-reading frequency dial is hand calibrated, and the amplitude of the high-level CW output is held constant to within ± 0.5 db over the entire frequency range by a fast-acting AGC circuit similar in design to the circuits used in our sweeping oscillators. A built-in, precision step-attenuator and metered output permit accurate quantitative measurements. The small size and the high-level output make the Utilator a very versatile production-line or laboratory tool.



990A



5070

Amplifiers



1025B

Model No.	Features
1022A	High 15V rms output Flat to within ± 0.25 db
1023A	40 db of gain; compact; 5, 10, 20 db built-in attenuator
1024A	Solid-state, compact, wide-band unit; gain 30 db; Rise time approx. 1.5 ns; low noise, power
1025B	20 KHz - 220 MHz Log Amplifier; Dynamic range 80 db; Linear range

1022A, 1023A, 1024A: These solid-state video amplifiers include two wide-band models with excellent gain-bandwidth characteristics, (40 db - 150 MHz, 30 db - 300 MHz), and a high output 8 MHz unit delivering 15 volts rms into 50 ohms. Each of these amplifiers has unusually flat response over its full frequency range. Each is designed for accurate input and output impedances of 50 ohms, but can operate an accessory probe to provide amplification from high-impedance outputs without loading down the test signals.

The 1023A and 1024A offer low noise figure and excellent pulse response in compact, low power units. As a general purpose laboratory test amplifier, the 1024A features a full 300 MHz wide passband, eliminating the need for adjustment or tuning. It provides a stable 30 db of gain matched to 50 ohms, and a maximum output of 0.5 volts. Short rise time of 1.5 ns, together with a minimum of overshoot, assures undistorted amplification of fast pulses. The 1023A provides 40 db of gain over 150 MHz. It includes a 3 step attenuator to provide flat, wide frequency gain in 5 db steps. Both 1023A and 1024A units are very useful pre-amps for frequency counters, oscilloscopes, etc.

The 1022A with its high output into 50 ohms is par-

ticularly suited for video distribution systems and for use with video sweep generators in developing large test signals for sweeping very lossy filters. In all units, carefully designed feedback circuits and power supplies assure excellent gain stability. Signal to noise ratios are also excellent.

For high impedance applications, the 965A broad-band probe is designed for operation with these 50 ohm input amplifiers.

1025B: The 1025B gives overall response, and at the same time gives detailed, easily seen measurements of points on the curves as far down as 80 db. The unit permits highly accurate viewing of the skirts and sharp slopes of bandpass filters, single side-band filters, traps, etc. A control gives expansion of the top critical points simultaneously with the log display. 80 db log range, also available as undetected RF signal.

965A: The 965A broad-band, low-loss probe offers a high impedance connection to any 50 ohm input. It is designed particularly to operate with the Kay 792A Noise Test Set, 1025B Log Amplifier and the 1024A Wide Band Amplifier. Connection of these broad band, 50 Ω inputs can easily be made to high impedance points in amplifiers and to the outputs of high impedance filters.

Noise Generators

Tuned input amplifier is continuously variable from 10 to 120 mc to give quick and easy operation with almost all receivers. External, hot wire noise source gives low VSWR from 10 to 900 mc, and precisely known noise output, so that overall system accuracy is less than ± 0.5 db.

The 792-A offers variable impedance and balanced outputs, provides complete measurements up to 26.5 gc. It offers carefully metered noise figure ranges of 5 to 30 db for waveguide and diode sources; 0 to 20 db for hot wire and diode sources. Infinity is marked. Either 6 db or 15.2 db excess noise can be selected for maximum accuracy at either high or low noise figures.

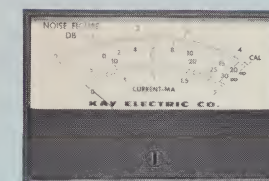
The 792-A offers a wide operating range of input noise levels, 75 dbm to 0 dbm for a nominal 1.0 mc bandwidth. It requires only 33 db of external gain between its IF input and its lowest output noise source. Switched, panel-controlled attenuation of 41 db in one db steps and a highly effective AGC with a dynamic range of 40 db are provided. To accommodate long term variations in system gain, a self-calibrating feature is included. Manual operation including a variable gain control is front panel selected.

240, 403, 780: These models are calibrated random noise sources providing output over a wide frequency and power range. They employ noise diodes with tungsten filaments as temperature-limited noise generators. The plate voltage of the noise diode is regulated and the diode plate current, (proportional to noise power output), is variable by a front panel control. A calibrated meter provides direct reading in noise figure. The ability to vary the noise output in an accurately known way, greatly simplifies the measurement process since it permits precise matching of circuit noise rather than a more complicated referencing back to some fixed output.

Model No.	Frequency Range	Noise Range
240B	5-220 MHz	0-23.8 db
403A	3-500 MHz	0-19 db
780A	1 MHz - 3 GHz	0-20 db Variable
792A	10-1000 MHz	0-20 db



792A



792-AFE Automatic
Noise Figure Meter

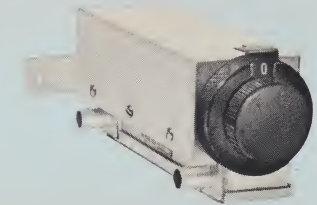
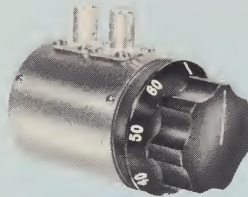
Attenuators

Kay in-line and rotary attenuators are designed to provide a means of inserting an accurate and fixed amount of loss in circuits operating in the DC - 1.3 GHz range. Attenuation is controlled by field-proven high-frequency toggle switches. Solid silver contacts set in Teflon for low loss and superior match are employed throughout. The precision resistors used are 1% tolerance, carbon film resistors. The maximum total error is very low and incidental insertion loss is negligible. These units have met rigid environmental tests and are traceable to N.B.S.

The individually-switched steps are isolated in broad-

tuned, shielded compartments, providing high accuracy and a flat frequency response over the specified range. All models are symmetrical, (bi-directional), attenuators. Most models are available in either 50, 75, or 90 ohms.

To afford maximum utility, Kay in-line attenuators are available for your special built-in applications. These attenuators are ideally suited for inclusion in a wide variety of equipment, such as test equipment, IF amplifiers, receivers, etc. In general, the electrical specifications are the same as for the in-line model. They differ, however, in mechanical configuration..



Series	20*	30*	70*	40	50*	60-0	60-1	60-01	100**
Attenuation Range	0-41 db in one db steps	0-101 db in one db steps	0-22.1 db 0.1 db steps	0-119 db in one db steps	0-99 db in one db steps	0-10 db in one db steps	0-60 db in ten db steps	0-1 db in 0.1 db steps	0-132 db in one db steps
Attenuation Steps (db)	6 Steps 1, 2, 3, 5, 10, 20	9 Steps 1, 2, 3, 5, 10, 20, 20, 20, 20	9 Steps .1, .2, .3, .5, 1, 2, 3, 5, 10	9 Steps, 1 db ea. 11 Steps, 10 db ea.	9 Steps, 1 db ea. 9 Steps, 10 db ea.	10 Steps 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	6 Steps 10, 20, 30, 40, 50, 60	10 Steps .1, .2, .3, .4, .5, .6, .7, .8, .9, 1.0	9 Steps 1, 2, 3, 6, 10, 20, 30, 30, 30
Frequency	DC to 1 GHz		DC to 250 MHz	DC to .5 GHz	DC to 1 GHz	DC to 1.3 GHz			DC to 1 GHz
Type of Controls	In-line Toggle Switches			Dual-Rotary, Digital		Rotary-Step			Miniature In-line
Typical Overall Accuracy $\pm$	0.6 db: 0-.25 GHz 1.2 db: .25-.5 GHz 2.0 db: .5-1 GHz	0.5: 0-.25 GHz 0.9: .25-.5 GHz 1.2: .5-1 GHz	5% at .1 GHz .5 db at .25 GHz	.6 db: 0-.25 GHz 1.2 db: .25-.5 GHz	.6 db: 0-.5 GHz 1.5 db: .5-1 GHz	.2 db: 0-.3 GHz .3 db: .3-1 GHz	2% at .3 GHz 5% at 1 GHz	.025 db: 0-.5 GHz	1.0 db: 0.5 GHz 1.5 db: .5-1 GHz
Maximum VSWR	1.2:1, 0-.25 GHz 1.4:1, .25-1 GHz	1.2:1, 0-.25 GHz 1.4:1, .25-1 GHz	1.2:1, 0-.25 GHz	1.2:1, 0-.25 GHz 1.4:1, .25-.5 GHz	1.2:1, 0-.5 GHz 1.4:1, .5-1 GHz	1.1:1, 0-.3 GHz 1.3:1, .3-1 GHz		1.1:1, 0-.3 GHz 1.4:1, .3-1 GHz	1.2:1, 0-.5 GHz 1.4:1, .5-1 GHz
Insertion Loss 0- 250 MHz 250- 500 MHz 500-1000 MHz Typical (db)	$\leq .1$ $\leq .2$ $\leq .6$	$\leq .1$ $\leq .1$ $\leq .5$	$\leq .1$	$\leq .1$ $\leq .2$	$\leq .2$ $\leq .6$ ≤ 1.0	$\leq .1$ $\leq .1$ $\leq .2$	$\leq .1$ $\leq .1$ $\leq .2$	$\leq .1$ $\leq .1$	≤ 0.2 ≤ 0.35 ≤ 0.7
Power (watts)	1	1	1	$\frac{1}{2}$	1	1	$\frac{1}{2}$	1	$\frac{1}{2}$

*This series is available in 50, 75, and 90 ohms. Special models are available on request.

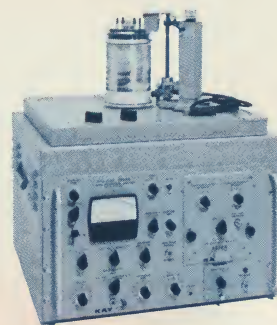
**Also available in 0-101 db at \$120. Also 50, 75, 90 ohms.

Model No.	Range (Hz)	Function
675	5-15000	Sound, Vibration Analysis
6051	85-8000	Voice Identification
6061	85-8000	Sound Analysis
6070	Plug-in	3-D Contour Display
6076	Plug-in	Relative Amplitude Analysis; Scale Magnification
6077	0-20000	Time Mark Generator
7029	5-16000	Sound, Vibration Analysis



Audio Spectrum Analyzers

7029



6076



6070



6061A, 7029A: These are completely solid-state sound spectrographs which produce permanent, visual records of complex audio, sub-audio frequency over their range. These units provide four different types of recorded analyses. The first relates frequency and intensity to time, with intensity displayed as changes in shading. Display #2 relates amplitude to frequency at a pre-selected point in time (section). The third type of record displays average available amplitude versus time.

The 7029A offers a new wider frequency range of 5 to 16000 Hz. In addition, it offers some choices of Sonagram time scale, permitting expansion of shorter duration signals (or sounds) and compression of longer signals (or phrases, etc.) For example, on the 40 to 4000 Hz frequency range, simple switching permits selection of sampling times (and Sonagram full scale time base) of 4.8 sec. or 1.2 sec., in addition to the usually provided 2.4 second sample. Models 6070, 6076, and 6077 are compatible with either of these units.

6051A: The Ident-a-graph has recently been designed for voice identification. The 6051A is the latest in Kay's line of high-speed, solid-state analyzers, which utilizes the proven circuit designs of the 6061A and 6070A. This new, easy-to-operate instrument takes information from a record, tape recorder, or microphone and makes clear accurate voice prints plotting frequency vs amplitude (in contour form) vs time as shown in the illustration above.

6076C, 6070A: These are solid-state plug-in units de-

signed for use with the 6061A and 7029A Sonographs. The 6076C performs two functions; 1) provides a full pattern display of any desired portion of the Sonograph's range; that is, upper and lower frequency limits are completely variable, and, 2) provides an amplitude vs time pattern similar to an oscilloscope display. The new 6070A contour display plug-in converts the marking signals of the Sonograph to provide a second three-dimensional display in addition to the conventional sonagram. Clearly defined contour lines at 6 db intervals provide greater visual range of amplitude discrimination. Gradations in shading correlated with the rise and fall of signal level in 6 db steps provide a meaningful and easily readable contour pattern. Interchangeable with each other these plug-ins may be purchased with the main unit or added at a later date as required. They may also be used simultaneously, complementing one another by providing 100% expansion of the contour display.

6077A: The time-mark generator is designed for use with Kay analyzers primarily to correlate the time scale of the recorded display with the timing of the signal being analyzed. It will impose clear, sharp marks along the time base of the spectrogram at points controlled by signals synchronized with the signal under test. The unit may be triggered by individual pulses or a train of pulses, and by sine waves. Spacing as close as 30 ms are obtainable. Selectable timed pulses are generated by the 6077A. Variable frequency positioning is provided.

NEW in this issue.

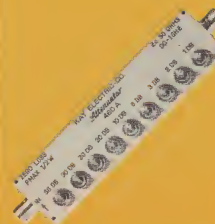


**New
TV Sweep
1483B**

**New
Sweep Plug-In
P154A**

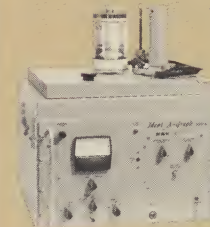


**New
Contour Display
Plug-In
6070A**



**New
Attenuator
460A**

**New
IF Sweep
1484A**



**New
Spectrophotograph
6051A**

Contents

SWEEP AND MARKER GENERATORS	2-3
RADIO AND TV GENERATORS	4
SWEEP-AIDS	4
AMPLIFIERS	5
NOISE GENERATORS	5
ATTENUATORS	6
AUDIO SPECTRUM ANALYZERS	7

Price List

SWEEP AND MARKER GENERATORS

121C	\$ 950	P856	\$ 630
P121	525	P860	475
P122	400	P867	215
P123	425	935C	1375
P124	425	1500	690
141D	1375	PM861	160 †
154C	950	PM932	160 †

PM7650	\$ 100 †
PM7660	105 †
159C	950
860G	525
PI123	420
P130	400
P141	505
P142	505
P152	400
P154	630
P855	630

AMPLIFIERS

1022	\$ 525
1023	345
965	105

ACCESSORY UNITS

255B	\$ 260
990A	395
997A	35

NOISE GENERATORS

792A	\$ 740
240B	400

PM7631	\$ 160 †
PM7632	160 †
361C	895
370A	525
386AR	1375
391A	995
392A	635
932	875
1483B	495
1484A	570

1024	\$ 315
1025	845

5070B	\$ 930
8040A	210
8050A	260

403A	\$ 400
780A	840

ATTENUATORS

SERIES

20	\$ 80	60	\$ 90
30	99	70	99
40	265	100	120
50	240		

AUDIO SPECTRUM ANALYZERS

669	\$ 315	6070	950
675	3130	6076	525
6051	2950	6077	315
6061	3130	7029	3950

**KAY
ELECTRIC COMPANY**

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Midwest Office

P. O. Box 2563**, South Bend, Ind. 46613 • (219) 272-2848

West Coast Office

P. O. Box 206*, Goleta, Calif. 93017 • (805) 967-9316

† Plus Markers

**Shipping Address: U.S. Route 31 North, South Bend, Indiana

*Shipping Address: 820 Wallace Becknell Road, Santa Barbara Airport, Goleta, California